

**REMARKS****I. Introduction--Claim Status**

This amendment under 37 C.F.R. §1.111 is submitted in response to the outstanding Office Action of December 19, 2000, and is accompanied by a Petition for Extension of Time with fee.

The Office Action indicates that claims 36-105 are pending, and that claims 57-70 and 92-105 have been withdrawn from consideration. Applicant gratefully acknowledges the Examiner's indication that claims 44-49, 72-77, 79-84 and 86-91 would be allowable if rewritten to overcome the applicable § 112 rejections set forth in the Office Action and to include all the limitations of the base claim and any intervening claims. Claims 41, 43, 48, 50, 55, 76, 83, and 90 are herein amended for clarity, and have not been narrowed by such amendments.

Applicant respectfully requests reconsideration in view of the herewith presented amendments and remarks.

**II. The 35 U.S.C. § 112, ¶ 2 Rejection and the Claim Objections**

Claims 43-56 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Office Action specifically identifies language in claims 43 and 50 believed to be indefinite, and generally asserts that claims 63-70 and 92-105 are replete with § 112, ¶2 issues such as improper antecedent basis and/or improper multiple dependent claim wording. The Office Action also objects to claim pairs 39 and 41, 46 and 48, 53 and 55, 60 and 62, 74 and 76, 81 and 83, and 88 and 90 as being identical due to the alternative language.

Applicant respectfully submits that the §112 rejections and the objections are obviated and rendered moot by Applicant's amendment to claims 36 and 71. Applicant respectfully requests withdrawal of the claim rejections under 35 USC § 112, ¶ 2.

### III. The Prior Art Rejections

The Office Action rejects claims 36, 43, 71, 78 and 85 under 35 U.S.C. §103(a) as being unpatentable over Nicia et al (US Patent No. 4,741,588). Applicants respectfully traverse this rejection.

More specifically, the Office Action asserts that Nicia discloses essentially all elements of these claims, except that Nicia (i) shows a prism instead of a plate, and (ii) does not explicitly show "that light is incident on said plate (prism) from said one surface side."

With respect to the prism, the Office Action alleges that it would have been obvious "to modify the shape of the prism of Nicia et al to include a plate as is well known and commonly used in the optical art." Relying on In re Dailey, 149 USPQ 47 and In re Kuhle, 188 USPQ 7, the Office Action also asserts that "since applicant has not disclosed that a plate solves any stated problem or is for any particular purpose, it appears that the invention would perform equally well with a prism." With respect to the claimed light incidence limitations, the Office Action relies on In re Gazda to assert that it would have been obvious "to arrange the light of Nicia et al to be incident on said one surface side of said plate (prism) through said prism means (9), since it has been held that rearranging parts of an invention involves only routine skill in the art.

Applicants disagree with this "obvious to modify" rationale, and with the reliance on case law to further assert the obviousness of interchanging/rearranging parts to provide

Applicants' claimed invention.

In particular, Applicants respectfully submit that Nicia does not teach or suggest, *inter alia*, a polarizing device that includes "a transparent plate which has a *polarizing beam splitting surface on one surface* and a reflection surface on the other surface, wherein light is incident on said transparent plate from said one surface side to be split into reflected light and transmitted light by said polarizing beam splitting surface so that the transmitted light is directed to said other surface and the transmitted light is caused to pass through said one surface by reflection by said reflection surface".

That is, Applicants submit that it would not have been obvious from Nicia to provide Applicants' claimed structure having *inter alia* a light incidence surface that is a polarizing beam splitting surface provided on one surface of a transparent plate. For example, viewing Figure 2 of Nicia, Applicants note that assuming *arguendo* that an attempt were made to cause light to be incident on the filter 10 through the prism 9, the lens 7 would interfere with the grating 14. Thus, Applicants submit that it would be difficult and beyond the skill of one of ordinary skill art to create a structure having light incident on the filter 10 through the prism 9 while the light incidence surface of the prism 9 is a polarizing beam splitting surface. Accordingly, it cannot be said that it would have been obvious to modify Nicia's prism in a manner that would provide Applicants' claimed invention.

Moreover, the Office Action's reliance on the case law is inapposite. For instance, as noted in MPEP §2144.04, in In re Dailey, "[t]he court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the

particular configuration of the claimed container was significant.” Similarly, as noted in the MPEP, in In re Kuhl obviousness related to “the particular placement of a contact in a conductivity measuring device”, namely “deleting a prior art switch member and thereby eliminating its function was an obvious expedient.” In the instant case, however, the difference between Applicants’ claimed invention and Nicia’s optical device 8 is neither merely a reconfiguration of the same components nor an elimination of an element—as explained above, Nicia does not teach or suggest *inter alia* that the prism may have a light incidence surface that is a polarizing beam splitting surface.

Similarly, Applicants respectfully submit that the Office Actions’ reliance on In re Gazda to assert the obviousness of having light incident on the plate from one surface side is inapposite. In re Gazda related to reversal of parts/movement; Applicants’ claimed invention—which includes the claimed optical path with respect to *inter alia* the claimed plate and its polarizing beam splitting surface (which is the light incidence surface) and reflective surface—does not represent an obvious reversal of Nicia’s parts (as explained above).

Furthermore, as MPEP §2144.04 expressly cautions when citing In re Kuhl, “The mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant’s specification, to make the necessary changes in the reference device.” Ex parte Chicago Rawhide Mfg. Co., 225 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). As explained, not only is Applicants’ claimed invention not merely a rearrangement of Nicia’s parts, but also there is no motivation or suggestion for modifying

Nicia as asserted in the Office Action as evidenced, for example, by the difficulties presented in trying to modify Nicia to have the light incidence surface of the prism 9 be a polarizing beam splitting surface (as explained above).

For at least the foregoing reasons, Applicants respectfully submit that claims 36, 43, 71, 78 and 85 are each patentably distinct over Nicia.

The Office Action also rejects claims 36-42 and 50-56 under 35 U.S.C. §103(a) as being unpatentable over Geffcken et al. It maintains that Geffcken discloses a “transparent plate (P) having a polarizing beam splitting surface (36) on one surface and a reflection surface (46a) on the other surface and a . . . phase plate (38) which obviously serves as a “half wavelength plate”. The Office Action further states that “if this is not the case, it certainly would have been obvious . . . to modify the . . . phase plate of Geffcken et al to include a half wavelength plate, since applicant has not disclosed that the half wavelength plate solves any state problem or is for any particular purpose”.

Regardless of the Office Action’s assertions concerning the half wavelength plate, Applicants submit that Geffcken does not teach or suggest, *inter alia*, “a transparent plate which has a polarizing beam splitting surface on one surface and a reflection surface on the other surface, wherein light is incident on said transparent plate from said one surface side to be split into reflected light and transmitted light by said polarizing beam splitting surface so that the transmitted light is directed to said other surface and the transmitted light is caused to pass through said one surface by reflection by said reflection surface”. .For example, referring to Figure 17, cited by example in the Office Action, Geffcken shows an arrangement of individual plates that are cemented and then obliquely cut. Radiation enters at an oblique edge surface 34 of the individual plates and is divided by a

layer 36 into parallel and vertical components. The parallel component traverses another individual plate, then is rotated by phase platelet 38, reflected by reflecting surface 46a through polarizing layer 36, then reflected by polarizing layer 36' which has a blackened back 47.

In stark contrast to Applicants' claimed invention, Geffcken's light entering surface does not have a polarizing beam splitting surface. Nor is the light transmitted through the surface 34 directed to "a reflection surface on the other surface" of the plate. Moreover, nor does Geffcken show that transmitted light reflected by a reflection surface is "caused to pass through said one surface [i.e., the surface onto which the light is initially incident] by reflection by said reflection surface." These illustrative differences between the optical paths traversed in Geffcken and those of the claimed invention reflect and highlight the non-obviousness of Applicants' claimed invention over Geffcken. Further, Applicants submit that not only are numerous limitations of Applicants' claimed invention neither taught nor suggested by Geffcken, but also no motivation or suggestion has been set forth for modifying Geffcken to provide Applicants' claimed invention.

Thus, at least for these reasons, Applicants' claimed invention (claims 36-42 and 50-56) is patentably distinct over Geffcken et al.

In sum, Applicants submit that the Office Action, in a piece-meal manner, improperly characterizes individual limitations of Applicants claimed invention as a whole as obvious changes/modifications in view of Nicia or Geffcken, summarily disregards various limitations (e.g., concerning the optical path with respect to the plate surfaces), and improperly relies on case law to assert obviousness of rearranging various elements.

Accordingly, Applicants respectfully request that if such rejections over the prior art will

be maintained in a subsequent Office Action, that the Office Action explicitly cite prior art to show each of Applicants claim limitations, and explicitly set forth a motivation or suggestion to modify and/or combine the references.

In view of the foregoing, Applicants respectfully request withdrawal of the §103(a) rejections of (i) claims 36, 43, 71, 78 and 85 in view of Nicia, and (ii) claims 36-42 and 50-56 in view of Geffcken.

#### **IV. Conclusion**

In view of the above amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Reconsideration and withdrawal of the Examiner's rejections is respectfully requested and allowance of all pending claims is respectfully submitted.

If any outstanding issues remain, or if the Examiner has any suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number below.

The Examiner's consideration of this matter is gratefully acknowledged.

#### **AUTHORIZATION**

The Assistant Commissioner is hereby authorized to charge any additional fees which may be required for this amendment, or credit any overpayment to Deposit Account **13-4500**, Order No. **1232-4046US2**.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Assistant Commissioner is requested to grant a petition for that extension of time which is

required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 13-4500, Order No. 1232-4046US2. **A DUPLICATE OF THIS SHEET IS ATTACHED.**

Respectfully submitted,

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Date: June 19, 2001

By:



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**CLAIM AMENDMENT ANNEX**

41. (Amended) An image apparatus comprising:

[a polarizing device of claim 36 or]

a polarization changing unit of claim 37; and

an image generator for modulating a polarized light from said polarizing device or said polarization changing unit to generate an image light.

43. (Amended) A polarizing device comprising:

a transparent plate which has a polarizing beam splitting surface on one surface and a reflection surface on the other surface, wherein light is incident on said transparent plate from said one surface side to be split into reflected light and transmitted light by said polarizing beam splitting surface so that the transmitted light is directed to said other surface and the transmitted light is caused to pass through said one surface by reflection by said reflection surface;

a half wavelength plate for causing polarizing directions of the transmitted light and the reflected light which have been split by said polarizing beam splitting surface to be mutually coincident; and

[wherein] a prism means [is] disposed on said one surface side of said transparent plate, [whereby] wherein [a] the light is [made to be] incident on said transparent plate through one of mutually orthogonal surfaces of said prism means and the light from said transparent plate is outgoing through the other one of said mutually orthogonal surfaces.

48. (Amended) An image apparatus comprising:

[a polarizing device of claim 43 or]

a polarization changing unit of claim 44; and

an image generator for modulating a polarized light from said polarizing device or said polarization changing unit to generate an image light.

50. (Amended) A polarizing [element] device according to Claim 36,

wherein

said polarizing beam splitting surface is formed on over all of said one surface and

said reflection surface is formed on all of said the other one surface.

55. (Amended) An image apparatus comprising:

[a polarizing device of claim 50 or]

a polarization changing unit of claim 51; and

an image generator for modulating a polarized light from said polarizing device or said polarization changing unit to generate an image light.

76. (Amended) An image apparatus comprising:

[a polarizing device of claim 71 or]

a polarization changing unit of claim 72; and

an image generator for modulating a polarized light from said polarizing

device or said polarization changing unit to generate an image light.

83. (Amended) An image apparatus comprising:

[a polarizing device of claim 78 or]

a polarization changing unit of claim 79; and

an image generator for modulating a polarized light from said polarizing device or said polarization changing unit to generate an image light.

90. (Amended) An image apparatus comprising:

[a polarizing device of claim 85 or]

a polarization changing unit of claim 86; and

an image generator for modulating a polarized light from said polarizing device or said polarization changing unit to generate an image light.